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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/693,173 | 10/23/2003 | Toshihiko Ouchi | 1232-5184 | 2615 |
| 27123 | 7590 | 01/11/2006 | EXAMINER | |
| MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101 | | | DOAN, JENNIFER | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2874 | |

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/693,173

Applicant(s)

OUCHI, TOSHIHIKO

Examiner

Jennifer Doan

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4 and 8-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,4 and 8-10 is/are rejected.
- 7) ☒ Claim(s) 3 and 11-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Applicant's communication filed on October 25, 2005 has been carefully studied by the Examiner. The arguments advanced therein are persuasive. In view of further search, however, a relevant document is found; therefore, a new rejection is set forth below. This action is **not** made final.

Specification

1. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 2, 4 and 8-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Nashimoto (U.S. Patent 6,529,667).

With respect to claim 2, Nashimoto (figure 13) discloses an optical interconnection device comprising an optical waveguide-layer (3), wherein the waveguide layer (3) is equipped with a plurality of electrodes (18, 19) which are independently drive-controllable such that a refractive index distribution is generated in the waveguide layer (3) by drive control of the electrodes to control a propagation state of light in the waveguide layer (column 3, lines 25-28) and an optical interconnection port (20) is provided on an upper or lower surface or inside of the waveguide layer (3) and wherein the optical interconnection port is comprised of an optical element (20) for receiving or emitting a light (column 15, line 21) in a direction approximately perpendicular to a light-waveguiding surface and an optical path conversion means provided corresponding to the optical element at a given position in the waveguide layer (see figure 13).

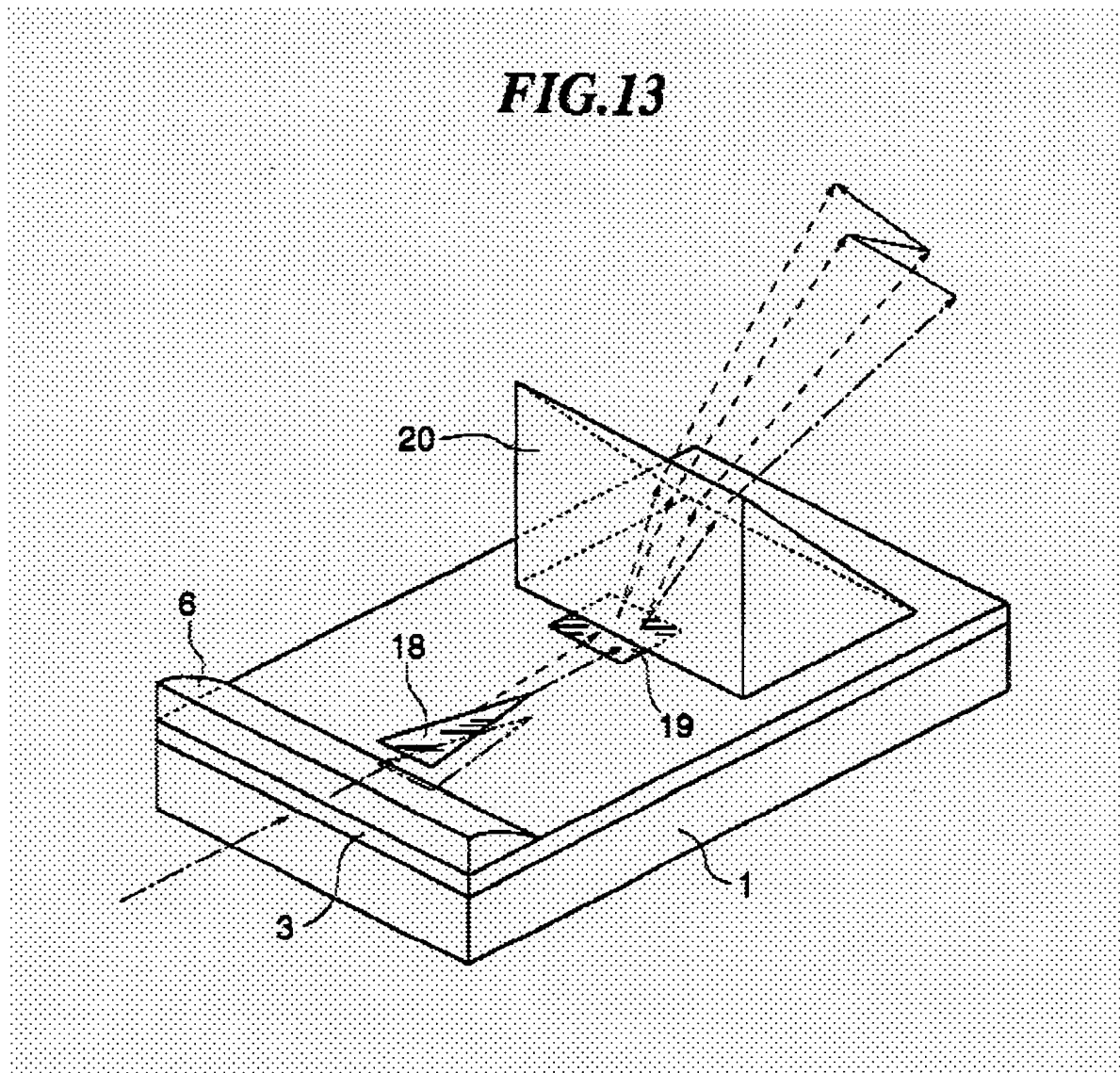
With respect to claim 4, Nashimoto (figure 13) discloses the optical interconnection device, wherein the optical element (20) is a surface element comprised of a semiconductor crystal (see figure 13) and has such a constitution that only a thin film layer necessary for receiving or emitting light of the semiconductor crystal is transferred to the waveguide layer and a semiconductor substrate is emitted (column 2, line 67- column 3, line 10).

With respect to claim 8, Nashimoto (figures 12 and 13) discloses a photoelectric mixedly mounted device comprising integrally, an optical interconnection device

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comprising an optical waveguide-layer (3) that is equipped with a plurality of electrodes (18, 19) which are independently drive-controllable such that a refractive index distribution is generated in the waveguide layer (3) by drive control of the electrodes to control a propagation state of light in the waveguide layer (column 3, lines 25-28) and an optical interconnection port (20) is provided on an upper or lower surface or inside of the waveguide layer (3), an electronic device connected to the optical interconnection port provided in the optical interconnection device and an electric wiring layer (see figure 12).

With respect to claims 9 and 10, Nashimoto (figure 12) discloses the photoelectric mixedly mounted device further having a package from equipped with a connection terminal for electric connection with the outside and a connection port for optical interconnection to the outside (see figure 12).



Allowable Subject Matter

4. Claims 3 and 11-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record fails to disclose or reasonably suggest the optical interconnection device, wherein the optical path conversion means is a light reflector with a convex shape, and the optical element is arranged around a top of the convex of the light reflector with their centers deviated from the top of the convex such that each optical element effects emission or reception only to and from a limited region within the waveguide layer as recited in claim 3; wherein the photoelectric mixedly mounted device further having such a configuration that a pattern of a manner of optical interconnection of the photoelectric mixedly mounted device is stored in a memory inside or outside of device and the pattern is read from the memory in accordance with an instruction to change the optical interconnection to switch an operation of the device as recited in claim 11; wherein the photoelectric mixedly mounted device further having such a configuration that a pattern of a manner of optical interconnection of the photoelectric mixedly mounted device is downloaded as a design asset from outside of the device and rewritten and an operation of the device is switched on the downloading as recited in claim 12 and an electronic equipment comprising the photoelectric mixedly mounted device to have such a configuration that connections between IC chips freedly reconfigured and a plurality of built-in system are switched by one equipment as recited in claims 13-15.

Response to Arguments

4. Applicant's arguments with respect to claims 2-4 and 8-17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Doan whose telephone number is (571) 272-2346. The examiner can normally be reached on Monday to Thursday from 6:00 am to 3:30 pm, second Friday off.
6. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jennifer Doan

Patent examiner

January 3, 2006